STEADI DRONE®

www.steadidrone.com

User Manual

QU4D

QU4D AIRFRAME

1 x Top Dome
1 x Foam Enclosure
1 x Top Main Plate
1 x Bottom Main Plate
6 x Inner Mounts
6 x Outer Mounts
1 x Airframe Screw Set (Screws, nuts spacers etc)
4 x 250mm Carbon Fibre Tubes
4 x Motor Mount Set
1 x Velcro Strap
3 x Landing Gear
1 x GoPro Bracket
1 x Lanyard & Sticker

QU4D KIT Also includes

1 x 20A Quattro ESC
4 x 3506 T-Motors
2 x 10” Prop Pair
1 x ArduCopter Flight Controller Kit

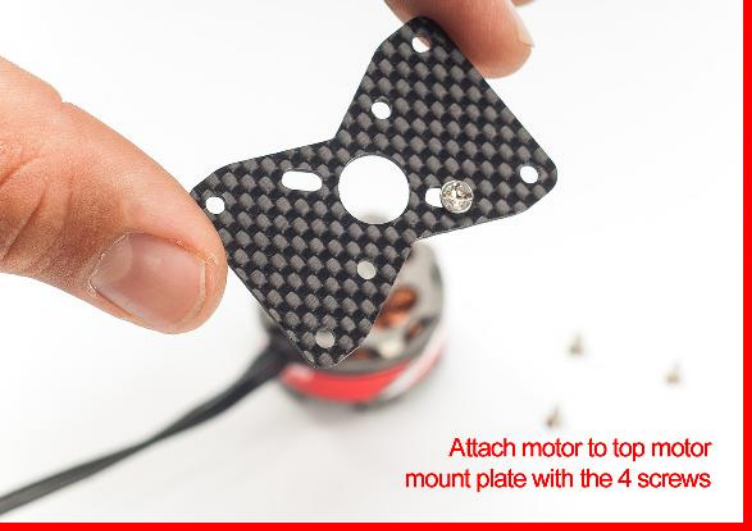
QU4D RTF KIT Also includes

1 x Spektrum DX5e Radio System
1x Wireless Data Telemetry Kit
1 x 4200mah 4S LiPo Battery
1 x Battery Charger
1 x LiPo Checker Alarm

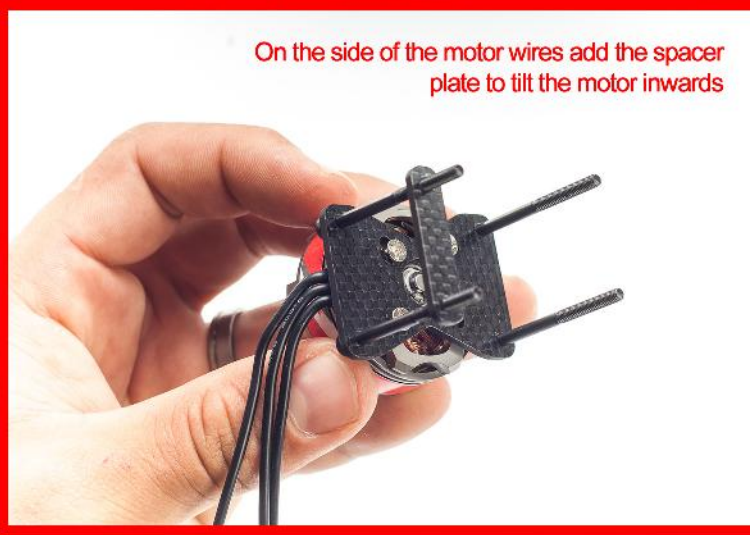
Please Note: Kits may also include various extra items and parts not listed here, screws, nuts, washers, foam pads etc

Parts List

QU4D

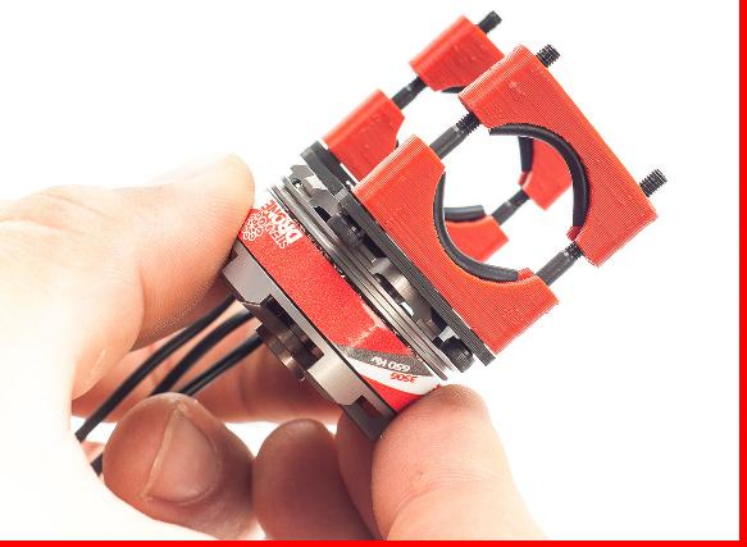

Attach motor to top motor
mount plate with the 4 screws

Insert the 4 x 40mm Cap Screws


On the side of the motor wires add the spacer
plate to tilt the motor inwards

Add the red brackets
to the motor mount

Insert the vibration rubbers into
the groove of the brackets

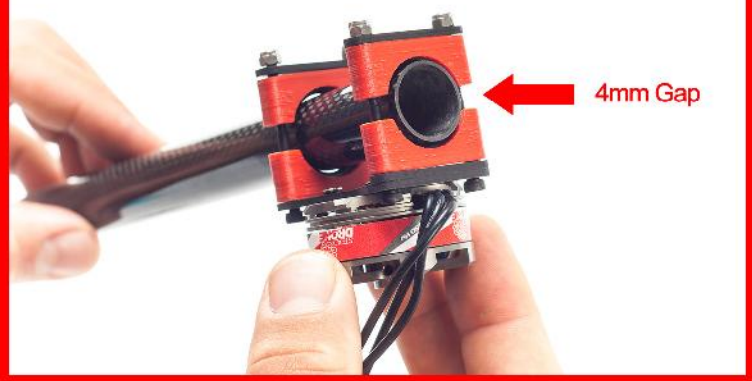


Add the 2 x bottom plates
to complete the motor mount

Attach the lock nuts
do not tighten yet

Insert the tube through the motor mount

Tighten the motor mount screws until
the gap between the red brackets is +-4mm apart



Insert the red tube end cap, you can use some hot glue to keep it in place, but after tightening the mount it should be held tight enough.

Pull the motor wires through the tube

Attach the prop adapter
to the motor with the small
included screws x 3

A 2mm Allen key to be used

Remember to put back the prop washer and nut

Notice the inward tilting motors,
this helps with stability of the drone

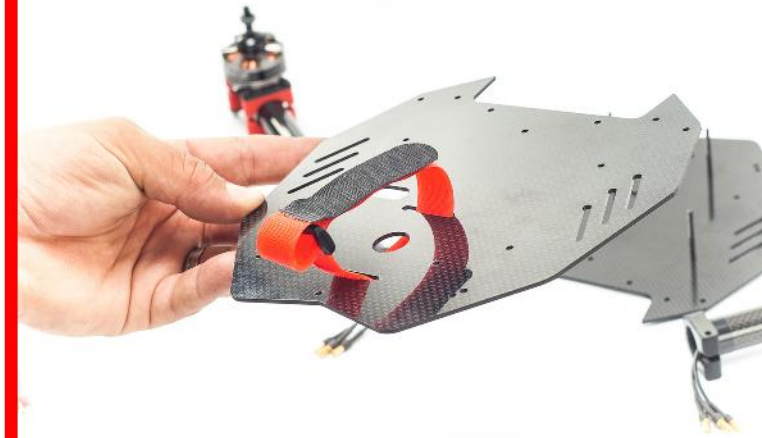
Repeat these steps with all 4 motor arms

Some insulation tape can be used to
ensure a good grip of the inner mount

Attach the inner mount over the tube,
it should sit flush with the end of the tube

Note the positions of the inner mounts and motor mounts

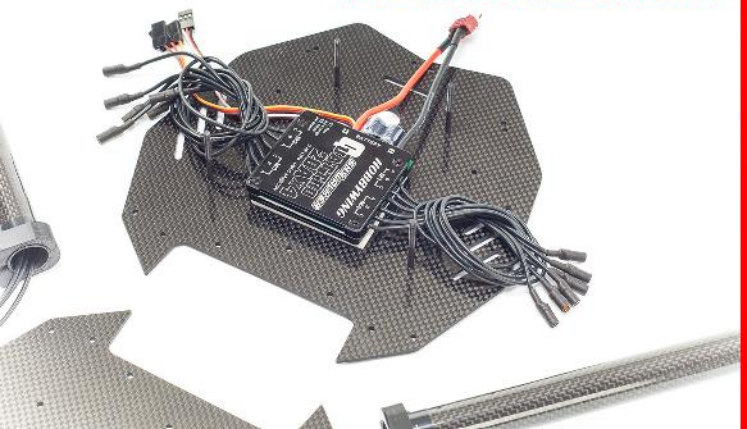
Add the velcro battery strap as shown



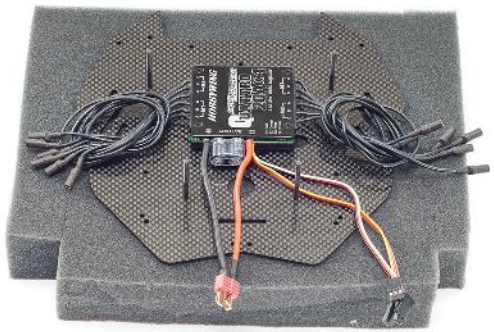
Insert the 4 x 35mm cap screws from the top of the top main plate

Double sided tape or hot glue can
be used to attach the ESC to the airframe

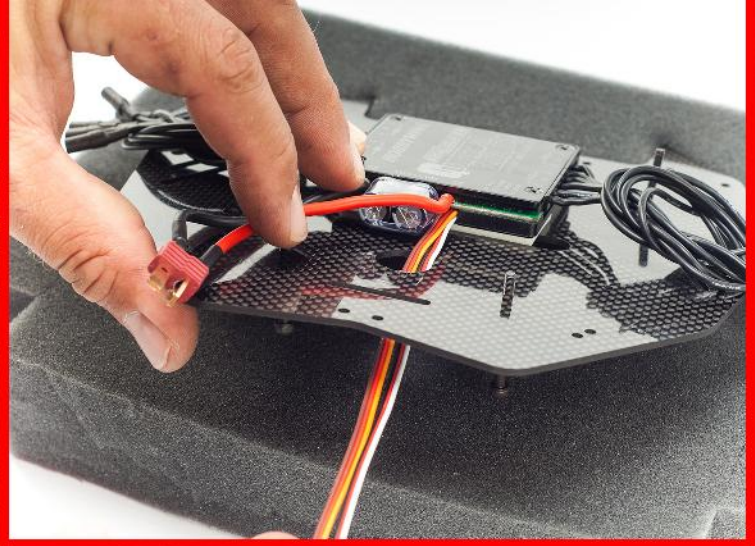
Attach the ESC to the bottom of the top plate
please note the position and spacing

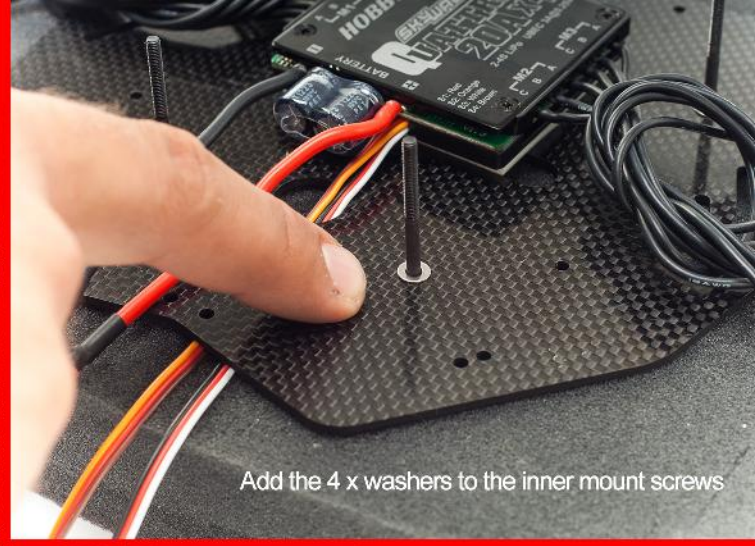


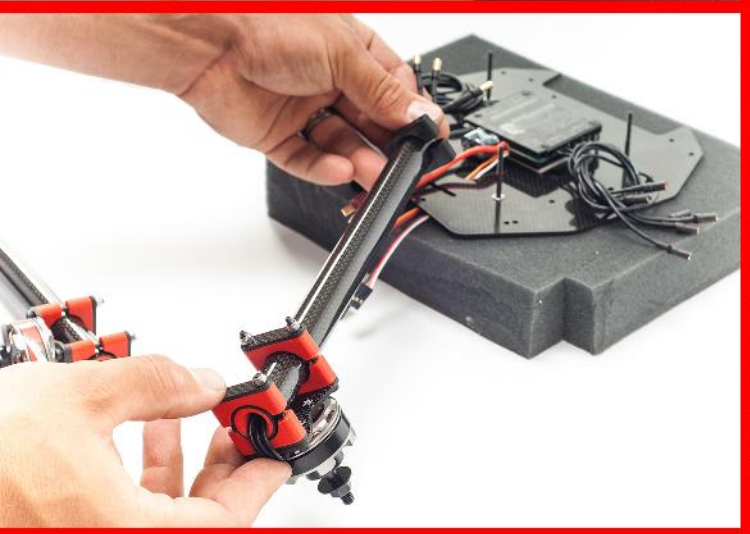
The ESC sits between the two main plates
and is attached to the top plate as shown.

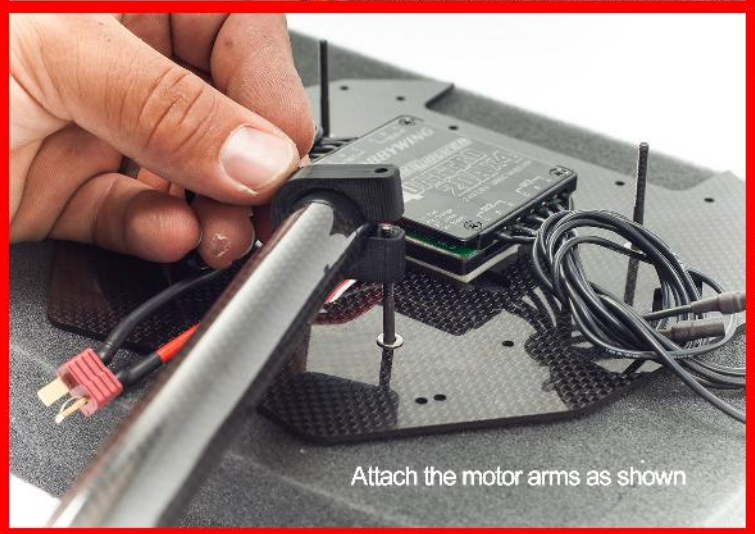


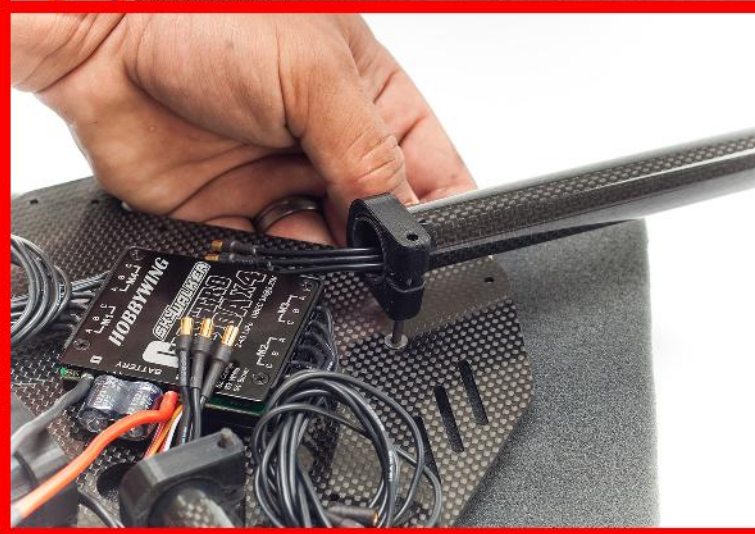
Run the ESC wires through the
hole in the airframe



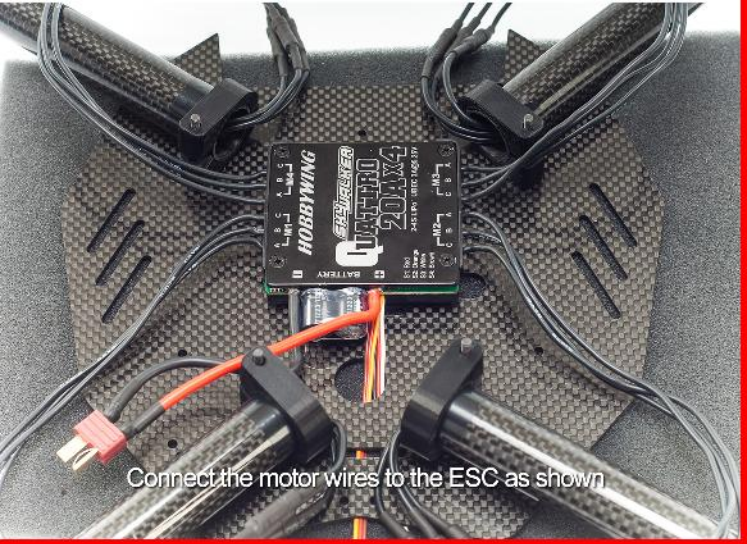

Add the 4 x washers to the inner mount screws

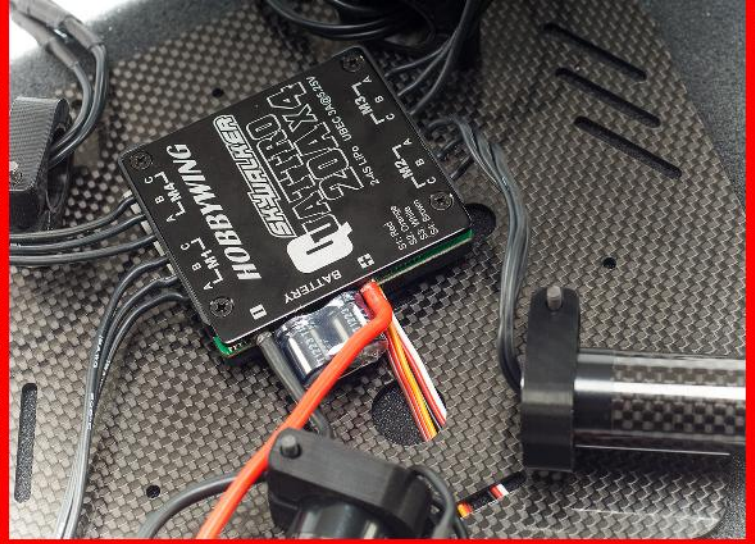


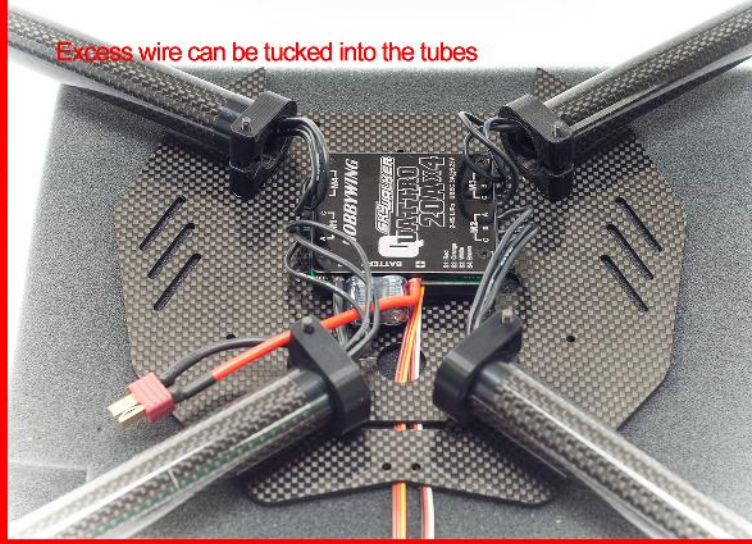

Attach the motor arms as shown

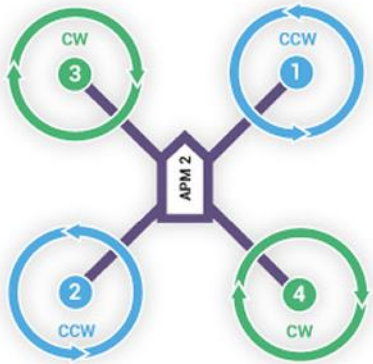


Ensure you have the inner mounts correct
Note we now have the drone upside down









Ensure motors spin in the correct direction,
this can be checked by connecting the ESC directly
to your receiver of the radio in the throttle channel.

ESC CALIBRATION

It's a good idea to also program the ESC for best performance.

The Quattro ESC can be programmed with the following settings:

Brake - Off
Battery Type - Lipo
Cutoff Mode - Soft Cut
Cutoff Threshold - Low
Start Mode - Normal
Timing - Low

Please use the included ESC user manual on how to do the calibration setup.

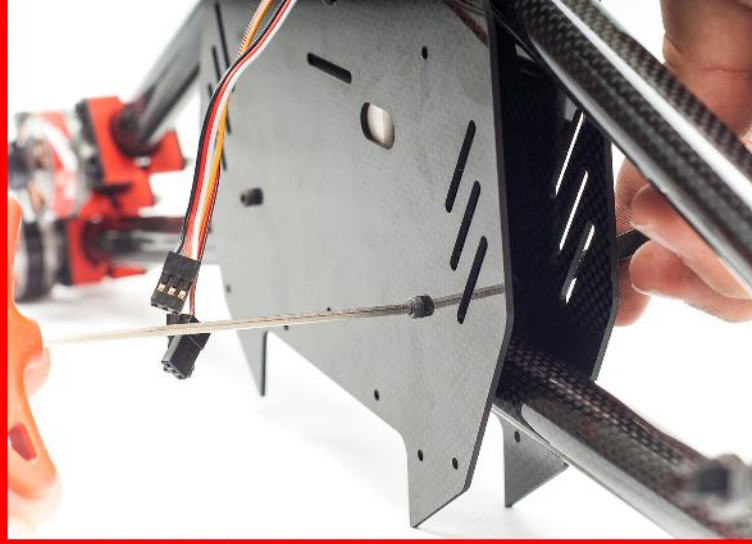
Attach the bottom dome plate by feeding
the screws through the correct holes as shown

Add the lock nuts

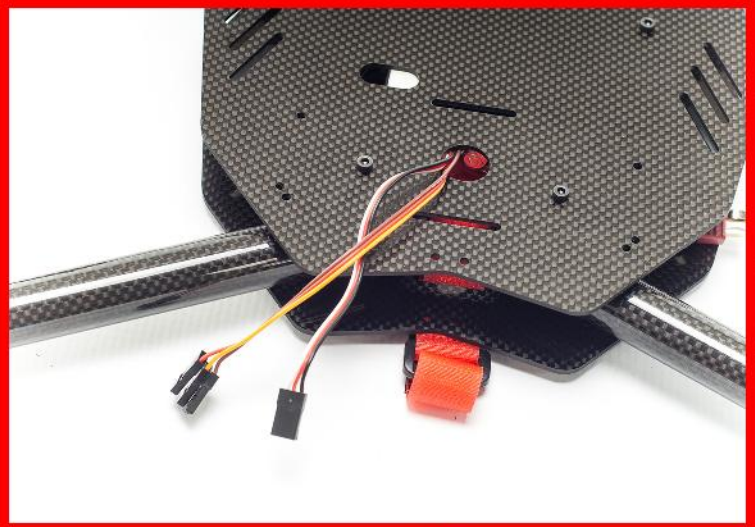
Keep in mind we are working with the drone
upside down for the airframe assembly

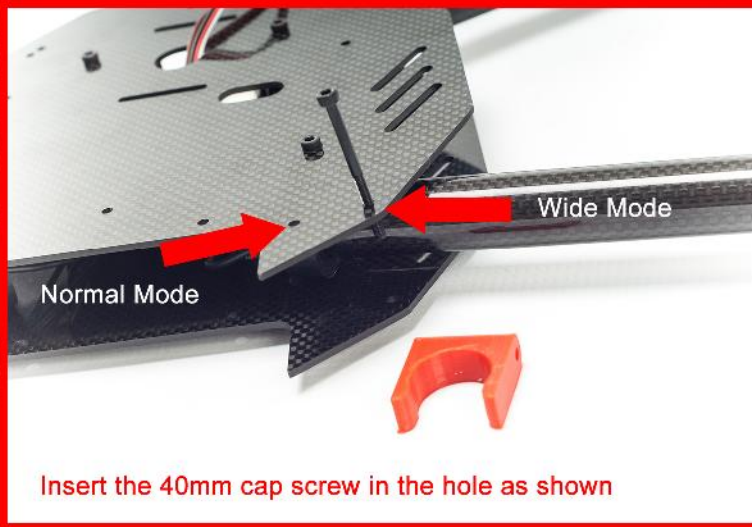
Ensure you have added the washers on both ends of the inner mount

Do not over tighten the inner mounts



Now we are ready to add the red outer mounts





Insert the 40mm cap screw in the hole as shown

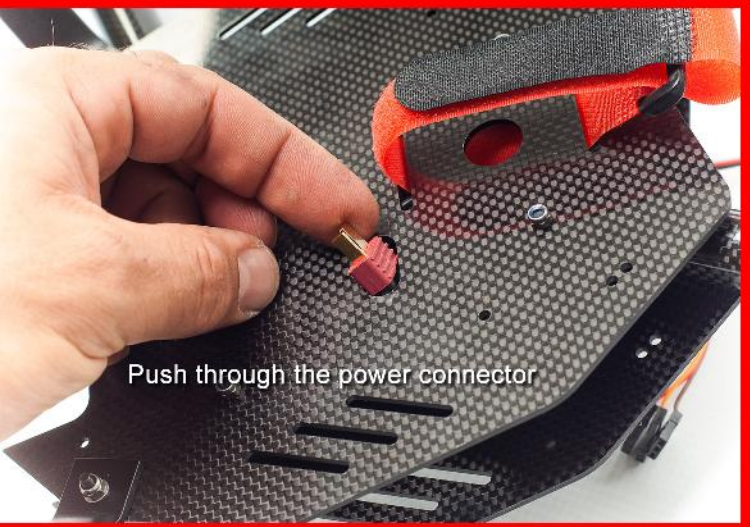
Add the outer mount as shown

Attach the front landing gear

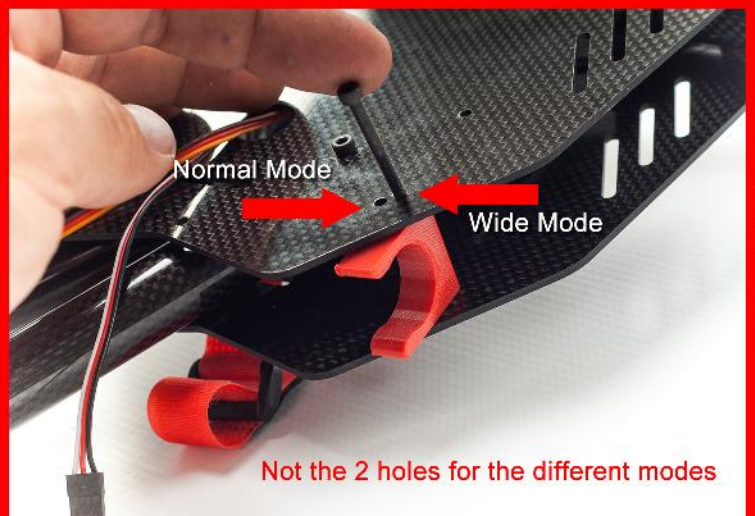
Remember the washer

Add the lock nut

This mount you can tighten well

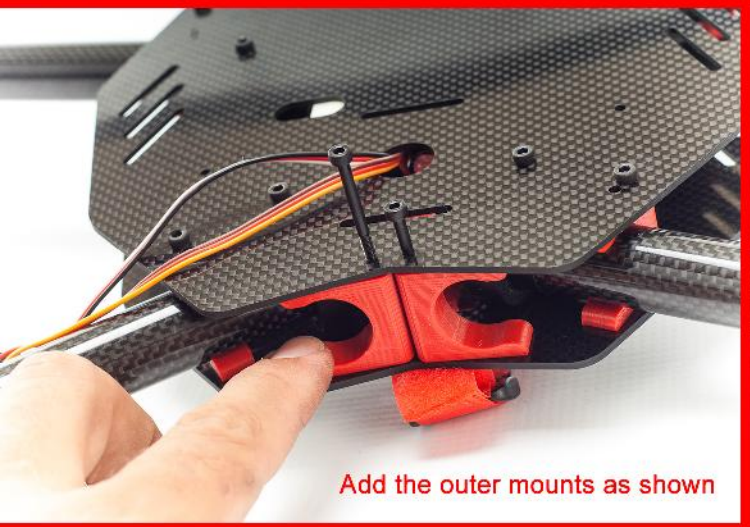

Push through the power connector

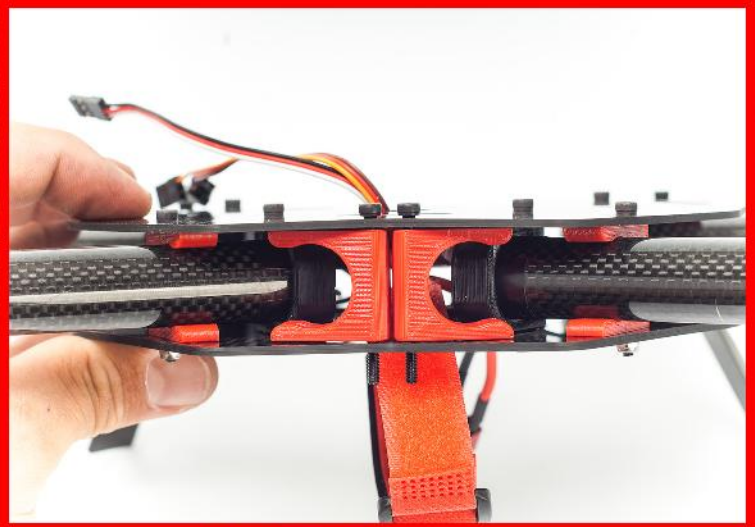
Insert the 35mm Cap Screw


Normal Mode
Wide Mode
Not the 2 holes for the different modes

Ensure all nuts are well tightened
The two rear outer mounts need to
be loose enough to move by hand

Insert the last 2 x 40mm Cap Screws as shown

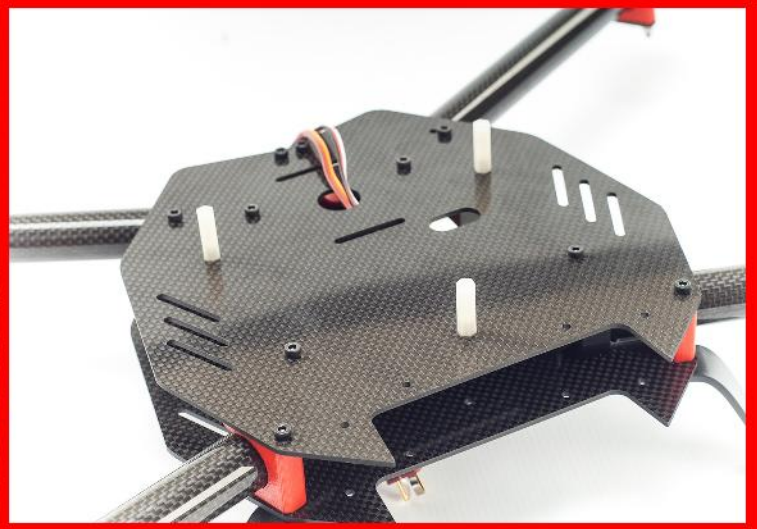

Add the outer mounts as shown

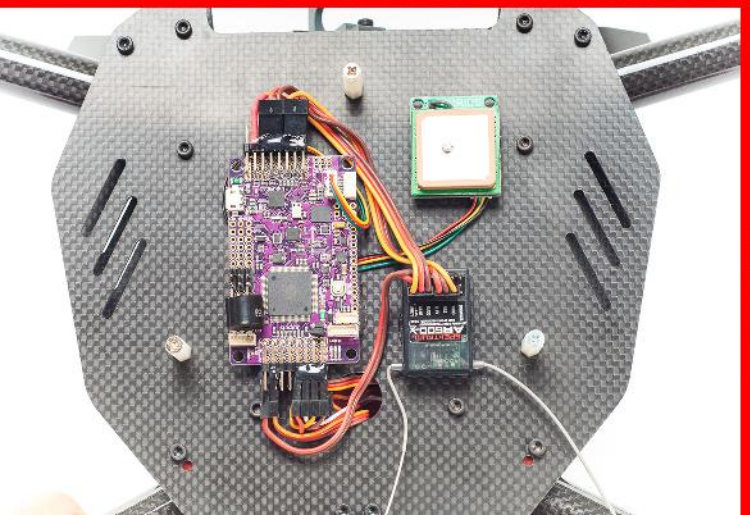


Before tightening, clip the rear
arms into the folded position

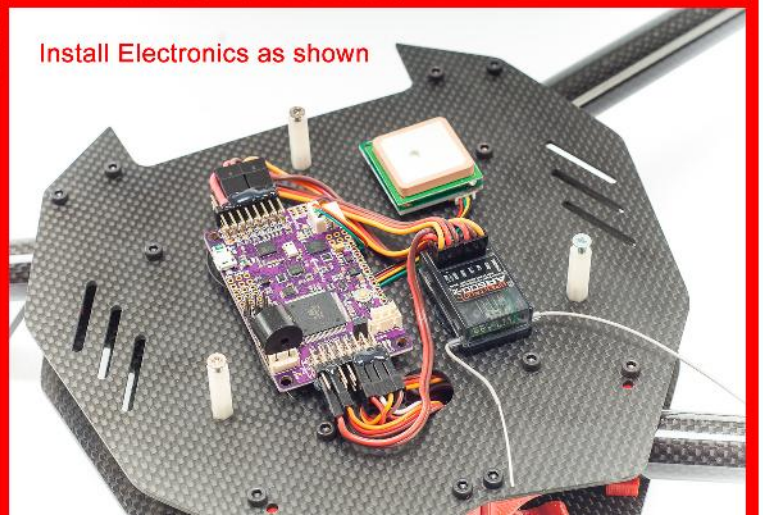
Add the rear landing gear leg

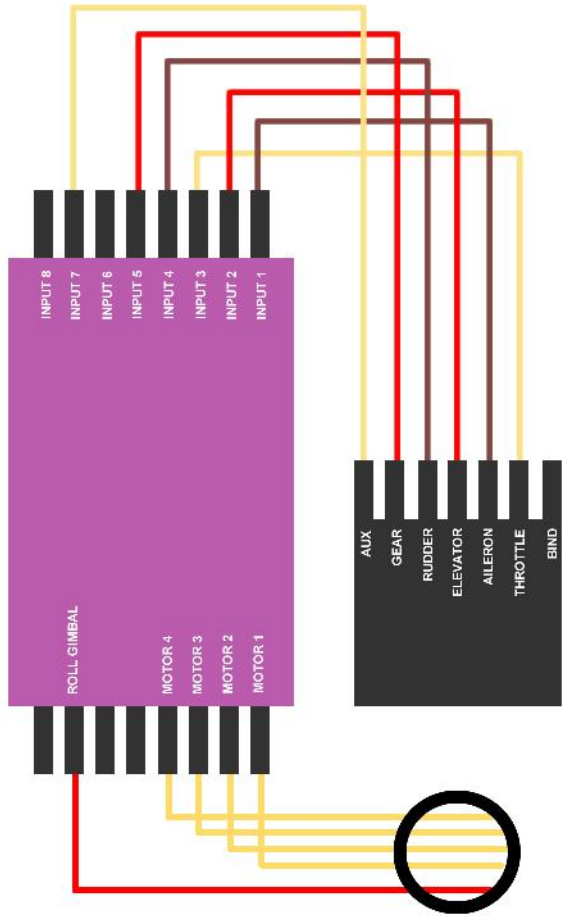
Now we are ready to add the electronics
and complete the build



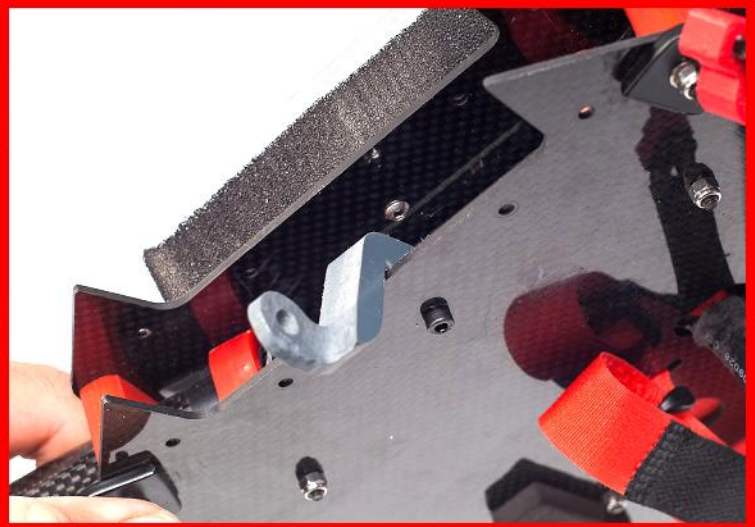


Install Electronics as shown





Install the GoPro Bracket as shown



Add the foam enclosure

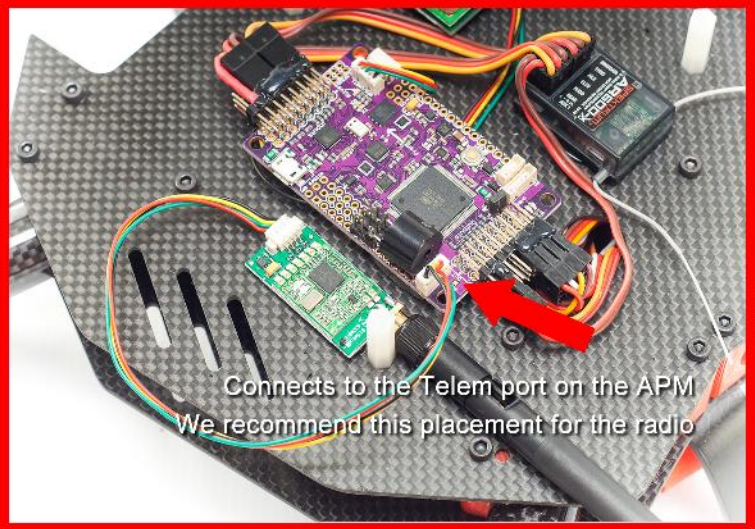
QUAD

Attach the top dome with the 3 remaining 6mm screws
QUAD

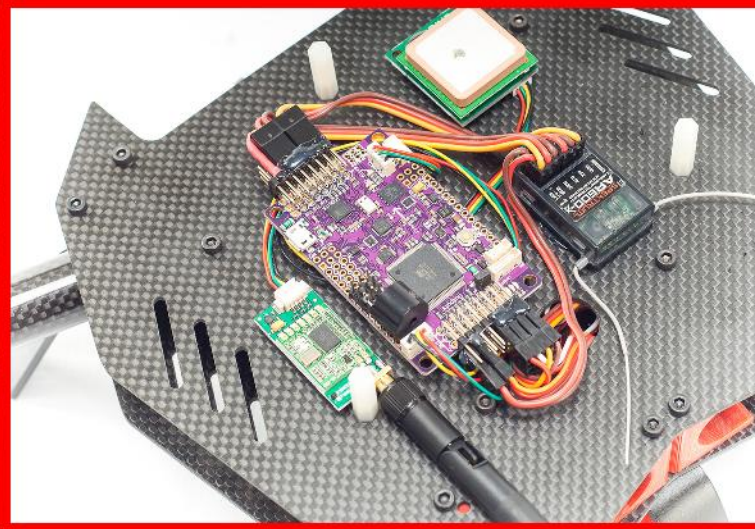
Attach the prop, washer and nut as shown

Tighten with a 10mm spanner or socket

Installing the Data Telemetry kit



Connects to the Telem port on the APM
We recommend this placement for the radio



The ground module can be used with a PC, Laptop or Android tablet
(a mico usb to female usb adapter is required to connect to a tablet)

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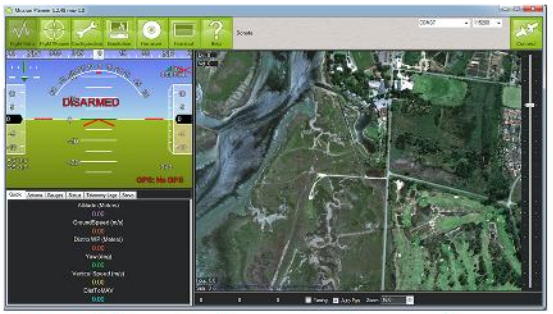
AGC
ANDROID GROUND CONTROL



To install and setup your drone and new firmware please see the video guide

www.vimeo.com/64847415

You will notice 3 modes on the 2 mode switches on your radio included with the QU4D RTF Kit

Firstly we have ***STABILIZE*** which is your default mode and the mode you should use when taking off and landing, this is also the only mode where you are able to arm and disarm your motors

STABILIZE mode is manual control but the drone will stabilize and level out with no stick input, no GPS or ALT hold in this mode.

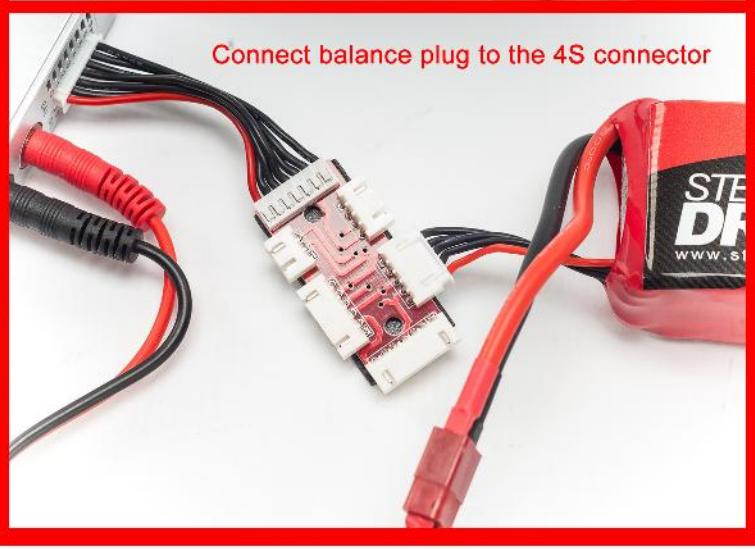
GPS HOLD, also known as ***LOITER*** will keep the drone in position both vertically and horizontally with the uBlox GPS sensor and the onboard altimeter.

You are still able to manually control the drone in ***LOITER MODE***, when you leave your sticks the drone will simply hold that position.

Altitude is help by putting your throttle stick at 50% (exactly half throttle) the drone will then keep the altitude, if you need to ascend, simply push the throttle stick above 50%, if you need to descend lower the throttle stick below 50% and to hold altitude again just keep the stick at 50%, this works in all autonomous modes like ***LOITER***, ***AUTO***, etc

The second switch is for ***RTL***, also known as return to launch or return home, by toggling this switch as shown in the bottom most left photo, the drone will attempt to come back to ***HOME*** position, which is where you armed the drone, it will by default first ascend 15m, then make it's way back above home and then descend and land, you can regain control anytime during this by simply releasing the RTL toggle switch.

Ensure that you do not trim any sticks and check that all trims are centred. Also be sure not to keep the RTL switch toggles when powering on the radio.



The QU4D batteries are 4200mah 4S Lipo (Lithium Polymer) the charger needs to correspond with these specifications.

1) In the charger menu select LIPO charging mode

2) Press the ENTER button to select the correct AMPS and VOLTAGE, ensure you select 5A and 4S VOLTAGE of 14.8v, you will see the 4S symbol

3) Press and hold ENTER again, simply confirm by pressing ENTER once more, you will see the charger charging the battery

PLEASE NOTE: Never charge a battery un-attended, always make sure you charge at the correct settings and read the safety label on the battery.

For more info on LIPO batteries see this great source online - http://www.rchelicopterfun.com/rc-lipo-batteries.html

First Flight - Check List

Always power up your radio first and ensure mode switches are in the default positions

Throttle stick at 0% - all the way down

Insert and fasten the battery, ensure it is tight and will not come loose during flight

Connect the battery and put the drone down and ensure you give it 5-10 second to initialize, the gyros need to be still for a few seconds to do this so do not hold the drone

Before arming the drone, double check your mode switches, also make sure there are no people, kids or animals nearby and that your flying area is open and free of obstacles.

With your throttle stick at 0% arm your drone by keeping your YAW all the way right for about 5 seconds, a quick double beep from the drone will confirm it has armed

Gently move your throttle stick up until the drone lifts off the ground, get it out of ground effect and try maintain a steady hover about 1-2m, do not fly any higher on your first flight

Take this time to get to know your new drone and how it feels and reacts to control input

Give the drone a few minutes in the air to auto calibrate the compass and GPS before trying GPS HOLD or other advanced GPS features, the more the drone flies, the better accuracy you can expect from the GPS

After your first flight gently drop the throttle stick down until the drone touches down, ALWAYS disarm before approaching or picking up the drone!!

Safety / Terms & Conditions

The safety instructions are intended not only for the protection of the aircraft, but also to protect the safety of yourself and others. Improper operation can cause serious injury and property damage. In case of improper use, a SteadiDrone can be dangerous. SteadiDrone does not guarantee error-free behaviour of the hardware, electronics or software.

* Use at own risk. The Purchaser agrees to use of the electronics at his/her own risk (this also applies to associated computer software).

* Safe flying areas. The Purchaser agrees to refrain from flying over people and stay away from children and animals.

* Comply with local rules. The Purchaser agrees to comply with all local government rules, especially when flying near airports.

* Safe Flying. The Purchaser agrees to use his/her best judgement and always practice safe flying techniques.
* Maintenance/checklist. The Purchaser agrees to conduct a thorough systems check before each flight and to conduct periodic maintenance of the SteadiDrone.

*SteadiDrone is not responsible for inexperienced operators and is not accountable for the training or any equipment used in on, or with the aircraft. SteadiDrone systems involve complicated machinery that presupposes a basic knowledge of computer programming. If unfamiliar with programming or the SteadiDrone technology, the Purchaser agrees to seek further information and assistance.

USE OF THIS PRODUCT IS ENTIRELY AT YOUR OWN RISK!

* Do not touch the propellers while they are spinning!
* Do not attempt to hand launch or retrieve the QU4D by hand from the air as this could cause serious injury from the spinning propellers!
* Do not fly the QU4D into yourself or anyone else!
* Do not fly over or near people or animals!
* Do not fly indoors!
* Do not fly in strong winds!
* Do not fly in the rain or any form of irrigation!
* Do not fly in highly combustive environments!
* Keep out of reach of children!
* Do not land the QU4D in water!
* Do not over charge or over discharge the battery!
* Do not fly while under the influence of alcohol or any drugs!

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